

15. *Two new species of Boriomyia from South Africa* (Neuroptera, Hemerobiidae).
By BO TJEDER, Falun, Sweden. (With fifteen text-figures.)

This paper forms the first report of a study of material of the order *Neuroptera*, belonging to the South African Museum, Cape Town. My thanks and acknowledgements are tendered to the Director and Dr. A. J. Hesse for their confidence in entrusting to me the study of the rich collections of their Museum.

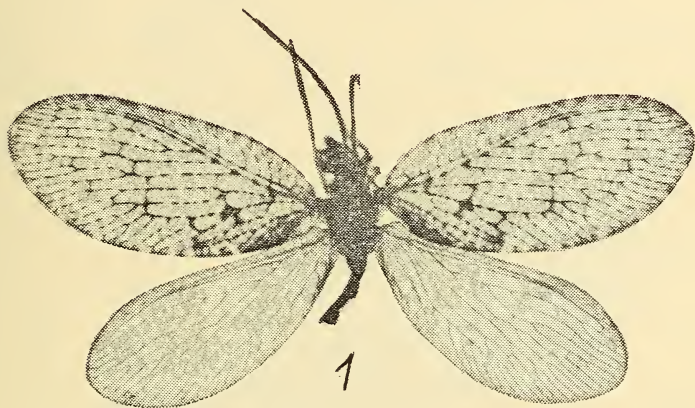


FIG. 1. *Boriomyia barnardi* n. sp. Holotype ♂.

Boriomyia barnardi n. sp.

Figs. 1-9

Holotype ♂. A dried and pinned specimen in good condition.

The frons is shining black. The vertex is yellowish brown. The mouth-parts and the antennae are pale yellowish brown.

The pro- and mesonotum have a broad, yellowish brown median longitudinal stripe, bordered laterally with blackish-brown. The metanotum is blackish-brown; its scutellum a little paler, brownish. The legs are testaceous. The tibiae of the anterior legs have three elongate, dark spots on their anterior surface: one below the knee, one near the middle and one before the apex.

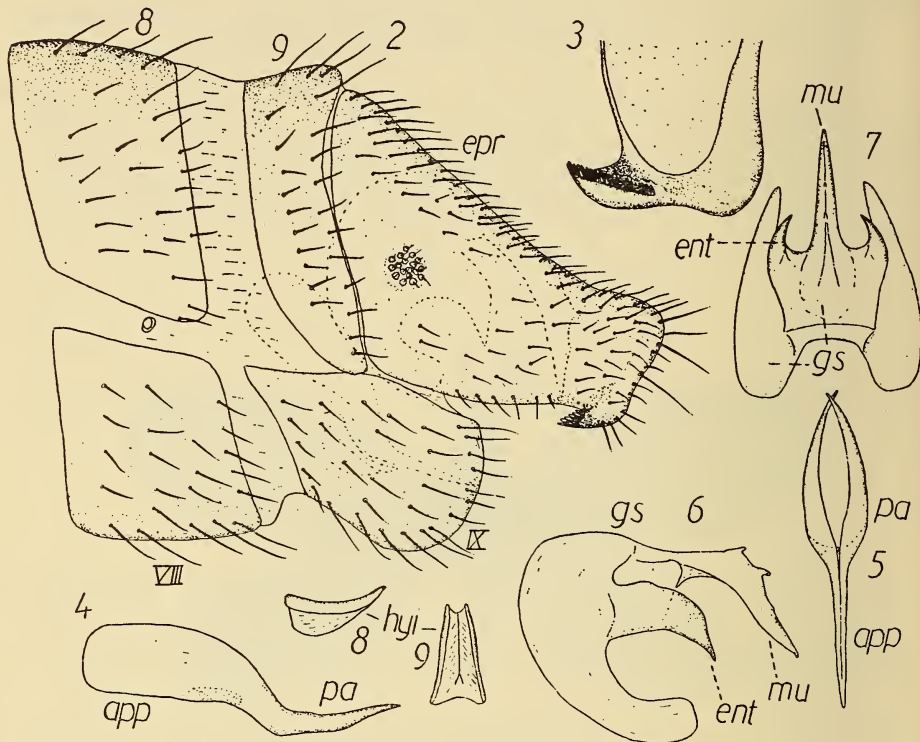
The fore-wings are elongate-oval. Their membrane is pale, with pale fuscous sagittate markings and with large fuscous patches as indicated in fig. 1.

The anal region is heavily dark coloured. The veins are blackish with pale interruptions.

The hind-wings are pale with pale venation.

The abdomen has brownish tergites and pale testaceous sternites.

The ♂ genitalia (figs. 2-9).¹ The 9th sternite (IX) is large and prominent, rounded. The parameres (pa) are narrow with very acute apices, without



FIGS. 2-9. *Boriomyia barnardi* n. sp. Holotype ♂.

2, apex of abdomen, lateral; 3, apex of right ectoproct, inside, in obliquely lateral aspect; 4, parameres, lateral; 5, ditto, dorsal; 6, gonarcus, lateral; 7, ditto, dorsal; 8, hypandrium internum, lateral; 9, ditto ventral.

superprocessus. Their apophysis proximus (app) appears very broad (high) when viewed laterally. The hypandrium internum (hyi) appears in dorsal view nearly parallel-sided. The gonarcus (gs) has a very long mediuncus (mu), the dorsal margin of which has two prominent teeth. Its apex is downwards directed and acute. The entoprocessus (ent) are large and end each in a downwards and a little inwards directed very acute apex. The ectoprocts (epr) are band-like, rather short and very broad in their proximal portion. Their apex

¹ The terminology used here is that which I have recently brought forward in a paper 'Genital structures and terminology in the order Neuroptera' (*Ent. Meddelelser*, Copenhagen, p. 22, 1954).

is produced downwards-inwards and bears an internal, straight row of short but strong teeth. The callus cerci is small and bears 18 trichobothria.

Size: length of body about 7 mm., of fore-wing 7.5 mm., of hind-wing 6.6 mm.

Female unknown.

Habitat: Cape Province, Kleinmond, February 1927; holotype ♂, leg. Dr. K. H. Barnard. In the South African Museum.

I have much pleasure in naming this species in honour of its discoverer.

This species belongs to the *nervosa*-group, represented in South Africa also by *B. nubila* Kimm. from Natal (*Ann. & Mag. of Nat. Hist.*, Ser. 10, vol. III, p. 127, f. 2, 3, 1929). *B. barnardi* n. sp. is similar to *B. nubila* Kimm. but easily distinguished by the ♂ genitalia.

Boriomyia fumosa n. sp.

Figs. 10-15

Holotype ♀. A dried and pinned specimen in less good condition (the head, the intermediate and the hind-legs are lacking).

The pro- and mesonotum have a broad, yellowish median longitudinal stripe, which is blackish punctured. Their lateral borders are black. The

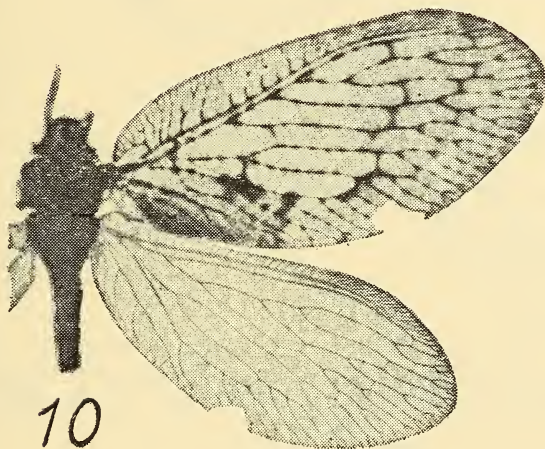
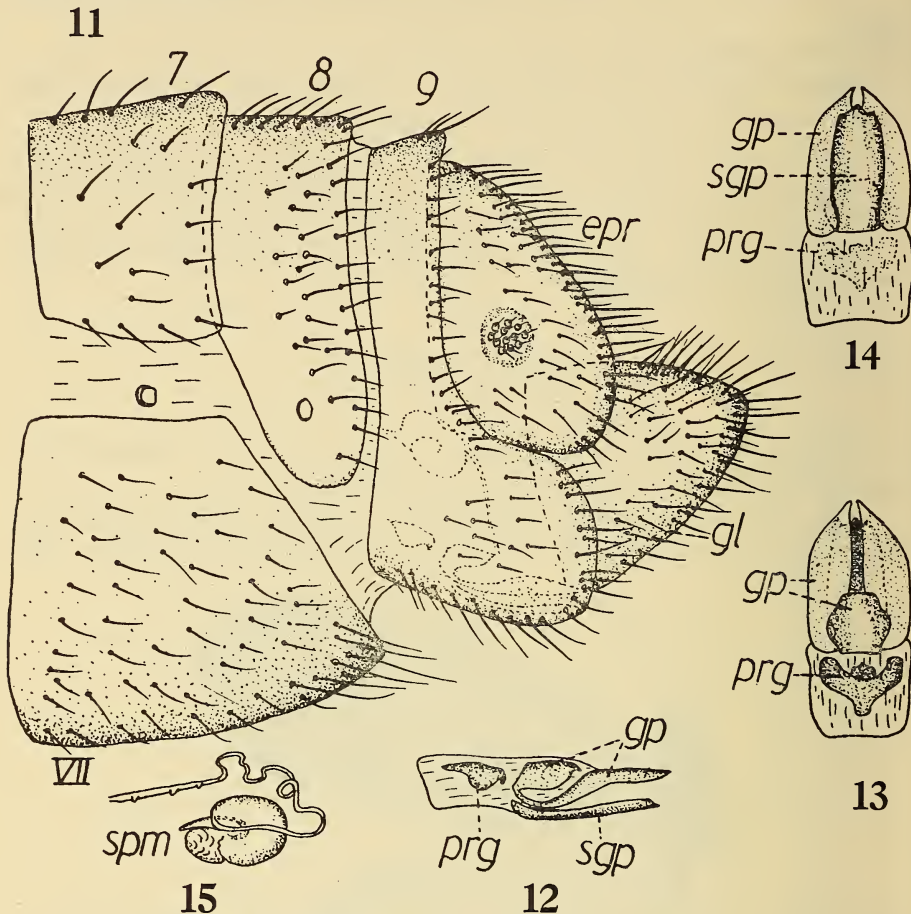


FIG. 10. *Boriomyia fumosa* n. sp. Holotype ♀.

metanotum is brownish black. The anterior legs are yellowish; their femora have a distinct reddish-brown longitudinal stripe along the anterior surface; their tibiae have a brownish ring below the knee and an ante-apical reddish-brown elongate spot on the anterior surface.

The fore-wings are oval. Their membrane is smoky, the sagittate markings being to a great extent confluent, especially in the distal portion and along the

hind margin. There are dark brown shadings and spots as indicated in fig. 10. The anal region is heavily dark-coloured. The venation is brownish black with pale interruptions.



FIGS. 11-15. *Boriomyia fumosa* n. sp. Holotype ♀.
11, apex of abdomen, lateral; 12, praegenitale and subgenitale with gonapophyses posteriores, lateral; 13, ditto, dorsal; 14, ditto, ventral; 15, spermatheca.

The hind-wings are pale with pale venation.

The abdomen is uniformly brownish.

The ♀ genitalia (figs. 11-15). The 9th tergite—viewed laterally—is in its upper portion band-like; on level with the spiracle of the 8th segment it suddenly broadens into a large and projecting lower portion. The subgenitale (spg) is parallel-sided and has a small, triangular apex. The gonapophyses posteriores (gp) are broad and pale, each ending in a rather acute apex. Proximally they are united into a plate, lying over their bases. A small praegenitale (prg) is present, the shape of which is indicated in the figs. 12-13.

The shape of the spermatheca (spm) is given in fig. 15. It should be noted that its duct has three tooth-shaped extensions. The gonapophyses laterales (gl) are almost triangular, their apex being rather narrow and subacute. The ectoprocts (epr) are elongate with rather smoothly rounded apex. Their cercal callus bears only 12 trichobothria.

Size. Length of body approximately 6 mm., of fore-wing 8 mm., of hind-wing 7 mm.

The ♂ is unknown.

Habitat: Cape Province, Grahamstown, February 1933; holotype ♀, leg. Dr. R. F. Lawrence. In the South African Museum.

Boriomyia fumosa n. sp. is a species of considerable interest because the presence of a praegenitale has never been noted before in this genus. In other respects the ♀ genitalia resemble those of the *subnebulosa*-group. *B. fumosa* n. sp. cannot, I am sure, be the female of *B. barnardi* n. sp. or *B. nubila* Kimm., which both belong to the *nervosa*-group, in which group the subgenitale and the gonapophyses posteriores of the females are differently shaped. It is to be hoped that South African entomologists will succeed in finding the ♂ of *B. fumosa*. Only when the ♂ has been studied can the definite position of the species be stated.